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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,195	12/15/2000	Yeon-kyoon Jeong	249/232	8453

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EXAMINER

WARE, CICELY Q

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 05/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/736,195

Applicant(s)

JEONG ET AL.

Examiner

Cicely Ware

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - a. Pg. 1, line 27, applicant uses the phrase "and each base stations is". Examiner suggests using "and each base station is" for clarification purposes.
 - b. Pg. 2, lines 1-2, applicant uses the phrase "antenna 100 receives high frequency signal". Examiner suggests using "antenna 100 receives a high frequency signal" for clarification purposes.
 - c. Pg. 3, line 7, applicant uses the phrase "matched life". Examiner assumes applicant means "matched filter".
Appropriate correction is required.
2. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

3. Claim 3 is objected to because of the following informalities:
 - a. Claim 3, line 1, applicant uses the phrase "coherent combing". Examiner suggests applicant uses "coherent combining" for clarification purposes.
Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi et al. (6,167,037) in view of Masui et al. (US Patent 6,269,088).

(1) With regard to claim 1, Higuchi et al. discloses a signal transmitting method comprising an apparatus for acquisition of a direct-sequence/code division multiple access signal, which acquires a long code from a direct-sequence/code division multiple access control channel signal, in which a common short code, and the long code are transmitted within one frame, and a group identification code indicating a code group, to which a base station belongs, are combined and transmitted with the common short code comprising: a long code masking correlation portion for correlating common short codes generated internally and the control channel signal; a differentially coherent combining portion for deciding whether acquisition of the common short code is achieved or not by multiplying a complex conjugate value of previous output of the long code masking correlation portion (Fig. 5 (12)) by present output of the long code masking correlation portion and by accumulating the results of multiplication during the predetermined times, and a code group and frame timing acquisition portion for acquiring the code group and frame timing by correlating each group identification code, which can be generated according to the coherence of the common short code, and the

received group identification codes respectively, and by combining each correlation result; and a long code acquisition portion for acquiring the long code by correlating the long codes belonging to the acquired code group and the received long code respectively (abstract, col. 1, lines 26-31, col. 4, lines 1-17, col. 10, lines 19-26, col. 11, line 34, 36, col. 14, lines 41-64, 15-31, col. 17, lines 23-60, col. 19, lines 15-38).

However Higuchi et al. does not disclose taking an absolute value of the accumulated value.

However Masui et al. discloses a CDMA mobile communication system taking an absolute value of the accumulated value (Fig. 8A, Fig. 9 (81), col. 8, lines 58-67, col. 9, lines 1-42, col. 10, lines 10-11).

Therefore it would have been obvious to one of ordinary skill in the art to modify the invention of Higuchi et al. to incorporate taking an absolute value of the accumulated value to employ a reservation based access control to realize a high throughput and solve the problem of collision of reservation packets.

(2) With regard to claim 2, claim 2 inherits all the limitations of claim 1. Higuchi et al. further discloses in (Fig. 5) wherein the long code masking correlation portion (12) is a matched filter correlator comprising a plurality of taps whose tap coefficients are the common short codes generated internally (col. 10, lines 27-66).

(3) With regard to claim 3, claim 3 inherits all the limitations of claim 2. Higuchi et al. further discloses wherein the differentially coherent combining portion comprises a discriminator (Fig. 1 (S1200)) for deciding whether acquisition of the common short code is achieved or not from the outputs of the absolute value calculator.

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higuchi et al. (6,167,037) in view of Masui et al. (US Patent 6,269,088) and further in view of Sriram et al. (US Patent 6,226,315).

(1) With regard to claim 4, claim 4 inherits all the limitations of claim 1. Higuchi et al. in combination with Masui et al. discloses all the limitations of claim 1 above. However Higuchi et al. in combination with Masui et al. do not disclose a switch for connecting each output of the long code masking correlation portion to output terminals which exist as many as the number of chips of the common short code, and repeating this process.

However Sriram et al. discloses a spread spectrum telephony with code acquisition comprising a switch for connecting each output of the long code masking correlation portion to output terminals which exist as many as the number of chips of the common short code, and repeating this process (Fig. 5, col. 7, lines 24-47, col. 8, lines 6-18).

Therefore it would have been obvious to one of ordinary skill in the art to modify the inventions of Higuchi et al. in combination with Masui et al. to incorporate a switch for connecting each output of the long code masking correlation portion to output terminals which exist as many as the number of chips of the common short code, and repeating this process in order to reuse one of the short codes as the long code group identification code.

(2) With regard to claim 5, claim 5 inherits all the limitations of claim 4. Higuchi et al. further discloses in (Fig. 5) wherein the long code masking correlation portion (12) is

a matched filter correlator comprising a plurality of taps whose tap coefficients are the common short codes generated internally (col. 10, lines 27-66).

Allowable Subject Matter

7. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made record of and not relied upon is considered pertinent to applicant's disclosure:

a. Bottomley et al. US Patent 6005887 discloses despreading of direct sequence spread spectrum communications signals.

b. Zhou et al. EP 0884856 A2 (cited by applicant) discloses a spread spectrum communication system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 703-305-8326. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw
May 12, 2004



STEPHEN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600